

AMENDMENTS TO THE CLAIMS

This listing of claims will replace all prior versions, and listings, of claims in the present application:

LISTING OF CLAIMS

Claims 1- 48 (cancelled)

Claim 49. (Currently amended) A biological sample archive system; said archive system comprising:

a sample repository comprising a plurality of samples derived from biological sources on fibrous DNA-immobilizing media, ~~said samples stored in substantially desiccated form on sample carrier means~~;

sample carrier means supporting said samples and media at known locations within said repository;

an information database comprising medical history, clinical or phenotypic information ~~associated with~~ derived from said biological sources corresponding to said plurality of samples;

means for determining a request for a sample selected from said plurality of samples in said repository based upon a query of said database;

automated means communicating with said determining means for locating and recognizing said selected sample from other sample in said repository and

means for removing at least a portion of said fibrous media comprising said immobilized sample based upon said request, and thereafter returning said sample carrier

to a known location in said repository ~~for repeating said locating and removing steps for other portions of said sample at a later time.~~

50. (previously presented) The system of Claim 49 further comprising unique identifiers associated with each of said samples recognizable by said recognizing means.

51. (currently amended) The system of Claim 49 wherein said samples in said repository are distinctly associated with optically readable identifiers.

52. (currently amended) The system of Claim 49 further comprising means for ~~organizing~~ depositing a plurality of said selected and removed at least sample portions into an ordered assembly on a multiwell plate.

53. (previously presented) The system of Claim 49 wherein said means for determining comprises a catalog of said samples and means for making said catalog and said associated database available to said requestor via a computer network.

54. (currently amended) The system of Claim 49 wherein said means for removing comprises mechanical cutting means operable to cut said fibrous media and to separate said at least portion from other sample portions in said repository having like sample composition.

55. (currently amended) The method of Claim 49 further comprising optical recognition means for detecting the location for said removal of said at least sample portion from ~~among~~ the proximity of other portions of like sample.

56. (currently amended) A sample archive system comprising:

a repository capable of storing a plurality of stabilized samples derived from biological sources ~~in substantially desiccated form~~ upon fibrous media for immobilizing a component of each of said plurality of samples at known locations, said samples being stored in separable portion format, each portion having been derived from the same biological source and having substantially identical composition and stored in close proximity in said repository;

computer means for identifying a one of said samples from information associated with said sample in an information database comprising medical, clinical or phenotype information,

automated means for ascertaining a location of said identified sample in said repository;

means for removing at least a separable portion of said sample.

57. (previously presented) The system of Claim 56 wherein said sample comprises a polynucleotide.

58. (previously presented) The system of Claim 56 wherein said sample comprises a protein.

59. (previously presented) The system of Claim 56 further comprising means to amplify said removed at least portions of said sample prior to further analysis.

60. (previously presented) The system of Claim 59 further comprising means for contacting said sample portion with other matter and detecting a specific binding event resulting from said contacting.

61. (previously presented) The system of Claim 56 further comprising robotic means for forming an ordered assembly of said sample portions.

62. (previously presented) The system of Claim 61 further comprising means to place said removed portion at a precise location and wherein said ordered assembly is a multiwell plate.

63. (currently amended) A sample archive system comprising:

means for receiving a request for a sample, which request was determined from accessing an information database comprising medical history, clinical or phenotypic information corresponding to the source of said sample;

means for identifying a sample stored in ~~substantially desiccated form~~ stored upon fibrous media having immobilizing treatment thereon in a repository;

means for locating said sample in said repository;

detection means for locating a sample portion to be removed and ~~detachment~~ removal means for removing at least a portion of said sample from other portions of said sample located proximate thereto;

means for placing said removed at least a portion of said sample in a selective location.

64. (currently amended) The system of Claim 63 wherein said removal ~~detachment~~ means comprises optical image recognition means.

65. (currently amended) The system of Claim 63 wherein said removal
~~detachment~~ means comprises mechanical cutting means.

66. (previously presented) The system of Claim 63 wherein said detachment
means comprises laser cutting means.

67. (previously presented) The system of Claim 63 further comprising sample
support structures within which said at least portions of said sample are stored.

68. (previously presented) The system of Claim 67 further comprising means for
returning said sample support structures comprising non-removed portions of said sample to
said repository for later locating and removal.